

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A WDM optical system comprising:
first and second WDM's;
an optical link for transmit and receive signals for each WDM;
each WDM including circuitry including a multiplexer and a demultiplexer;
each WDM including a plurality of separate optical to electrical converters connecting to a backplane at an electrical interface including a card edge connector, each optical to electrical converter removably mated with the circuitry and configured to transmit and receive common format signals and operate at a separate wavelength, the common format signals having the same format for each of the plurality of separate optical to electrical converters, each electrical interface including an identification feature configured to allow identification of an optical to electrical converter operable at a desired wavelength;
each WDM including a plurality of separate electrical to electrical converters, each directly and removably mated with one of the optical to electrical converters at a card edge connector to receive [[a]] power signal and to send and receive common format signals, each electrical to electrical converter including input and output signal locations and configured to provide conversion between native protocol media signals and the common format signals.
2. (Original) The WDM optical system of claim 1, further comprising splitter circuitry, wherein the optical link includes dual optical links, wherein two transmit and two receive signal pathways are provided.
3. (Previously Presented) The WDM optical system of claim 1, wherein the backplane includes two optical ports for removably connecting to the separate optical to electrical converters.

4. (Original) The WDM optical system of claim 1, wherein the electrical to electrical converter converts coaxial signals into a common format electrical signal.

5. (Original) The WDM optical system of claim 1, wherein the electrical to electrical converter converts twisted pair signals into a common format electrical signal.

6. (Original) The WDM optical system of claim 1, wherein the electrical to electrical converter converts optical signals into a common format electrical signal.

7. (Currently Amended) A WDM chassis comprising:

a backplane including an input power port, a control signal port, and a plurality of optical interface ports for interfacing with an optical to electrical conversion card, each optical interface port including a power port, a control signal port, and at least one optical port, the backplane further including an identification feature configured to allow identification of an optical to electrical converter card operable at a desired wavelength;

a plurality of optical to electrical cards each including a backplane interface portion for mating with the optical interface port and including a power port, a control signal port, and at least one optical port, each optical to electrical card including optical to electrical conversion circuitry for converting between common format signals and optical signals, each optical to electrical card including an electrical interface port including a power port, a control signal port, and at least one electrical port, the common format signals having the same format for each of the plurality of separate optical to electrical converter cards;

a plurality of electrical to electrical cards each including a rear interface portion including a card edge connector for removably mating directly with the electrical interface port and including a power port, a control signal port, and at least one electrical port, each electrical to electrical card including electrical to electrical conversion circuitry for converting between native protocol media signals and common format signals, each electrical to electrical card including a media interface port including at least one main signal port.

8. (Original) The WDM chassis of claim 7, wherein the at least one main signal port is a coaxial port.

9. (Original) The WDM chassis of claim 7, wherein the at least one main signal port is a twisted pair port.

10. (Original) The WDM chassis of claim 7, wherein the at least one main signal port is an optical port.

11. (Original) The WDM chassis of claim 7, wherein the backplane defines a first plane, and the optical to electrical cards each define a second plane transverse to the first plane.

12. (Original) The WDM chassis of claim 11, wherein the electrical to electrical cards each define a third plane parallel to the second plane.

13. (Original) The WDM chassis of claim 12, further comprising a chassis housing wherein the backplane defines a rear of the chassis housing, wherein the optical to electrical cards and the electrical to electrical cards are received in a front opening of the chassis housing.

14. (Currently Amended) A WDM optical system comprising:

a first WDM including a chassis and circuitry including a multiplexer;

a second WDM including a chassis and circuitry including a demultiplexer;

an optical link for transmitting multiplexed optical signals from the first WDM for receipt by the second WDM;

each WDM including a plurality of separate optical to electrical converter cards received by each chassis, each optical to electrical converter card connecting to a backplane in the chassis and operating at a separate wavelength to transmit and receive a main signal, each optical to electrical card removably mated with the circuitry via the backplane, the backplane including an identification feature configured to allow identification of the optical to electrical converter cards as operable at a desired wavelength;

each WDM including a plurality of separate main signal to electrical converter cards received by each chassis, each main signal to electrical converter card removably and directly mated with one of the optical to electrical converter cards at a card edge connector to receive [[a]] power signal and to communicate via the main signal, each main signal to electrical converter card including a main signal port and configured to convert between the main signal

and a native protocol media signal, the main signals having the same format for each of the plurality of separate optical to electrical converters.

15. (Original) The WDM optical system of claim 14, wherein the main signal to electrical converter cards convert between one of coaxial, twisted pair, and optical signals, and an NRZI format signal, wherein the optical to electrical converter cards convert between the NRZI format and optical signals at one of a selected wavelength for respective multiplexing and demultiplexing by the respective multiplexer and demultiplexer of the first and second WDM's.

16. (Currently Amended) A method of optical system management comprising:
providing multiplexing and demultiplexing circuitry for a multi-channel signal system;

mating a plurality of optical to electrical converter cards to the circuitry via a backplane, each optical to electrical converter card selected to transmit and receive optical signals at a distinct wavelength of light relative to the other optical to electrical converter cards of the multi-channel system, the backplane including an identification feature configured to allow identification of the optical to electrical converter cards as operable at a desired wavelength;

removably and directly mating an electrical to electrical converter card to a selected one of the optical to electrical converter cards at a card edge connector to receive [[a]] power signal and to communicate ~~via the main signal~~ with the selected one of the optical to electrical converter cards, wherein the electrical to electrical converter card transmits and receives native protocol media signals in a first format, and converts the signals to a second common format signal, wherein the signals of the second electrical format are converted to optical signals at the distinct wavelength of light of the selected optical to electrical converter card, the common format signals having the same format for each of the plurality of separate optical to electrical converter cards.

17. (Original) The method of claim 16, wherein the electrical to electrical converter card transmits and receives a coaxial native protocol media signal.

18. (Original) The method of claim 16, wherein the electrical to electrical converter card transmits and receives a twisted pair native protocol media signal.

19. (Original) The method of claim 16, wherein the electrical to electrical converter card transmits and receives an optical native protocol media signal.

20. (New) The WDM optical system of claim 1, further comprising a CPU card connected to the backplane of the first WDM at a card edge connector, the CPU card configured to:

send command and control signals to each optical to electrical converter and each electrical to electrical converter in the first WDM; and
communicate with the second WDM.

21. (New) The WDM chassis of claim 7, further comprising a CPU card connected to the backplane at a card edge connector, the CPU card configured to:

send command and control signals to each optical to electrical card and each electrical to electrical card; and

communicate with a WDM system remote from the WDM chassis.

22. (New) The WDM optical system of claim 1, wherein the first WDM further includes a CPU card connected to the backplane at a card edge connector, the CPU card configured to:

send command and control signals to each optical to electrical converter card and each electrical to electrical converter card; and

communicate with the second WDM.

23. (New) The method of claim 16, further comprising mating a CPU card to the backplane, the CPU card configured to send command and control signals to each optical to electrical converter card and to the electrical to electrical converter card and communicate with a far-end WDM.